ABSTRACT

~~The present invention relates to a~~ Provided are compositions comprising an oligonucleotide comprising ~~(a)~~ the sequence N_1-N_2-G-N_3-G, wherein N_1 represents any nucleotide if N_2 and N_3 are G; N_2 represents any nucleotide if N_1 and N_3 are G; and N_3 represents any nucleotide if N_1 and N_2 are G, ~~or (b) the sequence of (a),~~ wherein at least one nucleotide of the sequence optionally is replaced by a corresponding nucleotide analog or derivative. ~~The present invention also relates to an oligonucleotide having (a) a sequence selected from the group consisting of the sequences of SEQ ID NOs: 1 to 19, or (b) a sequence of (a), wherein at least one nucleotide is replaced by a corresponding nucleotide analog or derivative. Furthermore, a vector comprising an oligonucleotide of the present invention, a host cell comprising the vector of the present invention, a method for the production of the oligonucleotide of the present invention as well as a kit comprising the composition, the oligonucleotide, the vector, and/or the host cell of the present invention are described. The present invention further relates to the~~ Also provided are methods for use of the compositions~~, and/or the oligonucleotide~~ of the present invention for ~~the production of a pharmaceutical composition for preventing or~~ treating septic shock, inflammation, autoimmune diseases, T_H1-mediated diseases, bacterial infections, parasitic infections, viral infections, spontaneous abortions, and/or tumors~~. Also described is the use of the compositions, and/or the oligonucleotide of the present invention to~~, as well as for inhibiting activation of antigen-presenting cells, ~~to~~ inhibiting ~~the~~ uptake of DNA by a cell, ~~to stimulate~~ stimulating natural killer cells, ~~to co-stimulate~~ co-stimulating cytotoxic T-lymphocytes or natural killer cells, ~~to enhance the~~ enhancing production of antibodies directed against an antigen, ~~to enhance the~~ enhancing uptake of an agent by a cell, and/or ~~to induce~~ inducing proliferation of bone marrow cells in vitro or in vivo.